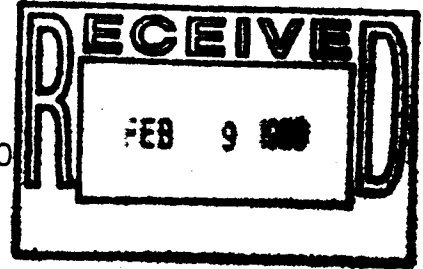


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February 5, 1999

**COMMENTS CONCERNING
THE NATIONAL TOXICOLOGY PROGRAM'S RECOMMENDATION
THAT ENVIRONMENTAL TOBACCO SMOKE BE LISTED AS A
HUMAN CARCINOGEN**

TO: Dr. C.W. Jameson, Chairman
Review Committee for the Report on Carcinogens
National Toxicology Program
EC-14
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Research Triangle Park, NC 27709

Over the years I have studied the issue of environmental tobacco smoke and have become quite familiar with the studies on humans that you cover in your background documents. I represent neither industry nor government and do not get paid for the work I do.

A major stumbling block with your recommendation that environmental tobacco smoke be included in your 9th Report on Carcinogens is that before you can list something as a human carcinogen, you must -- according to your own Criteria [1] -- provide "sufficient evidence" from studies on humans, and you have not done that in the case of environmental tobacco smoke.

For example, the tables provided in your background documents clearly show that the vast majority of studies find no statistically significant association between lung cancer and environmental tobacco smoke.

What's more, virtually all of the relative risks reported in those studies are below 2, and according to reputable epidemiologists, relative risks below 2 are weak and inconclusive:

"...relative risks of less than 2 are considered small and are usually difficult to interpret... Such increases may be due to chance, statistical bias, or effects of confounding factors that are sometimes not evident."
[2]

"The strength of association relates to causality. Relative risks of less than 2.0 may readily reflect some unperceived bias or confounding factor, those over 5.0 are unlikely to do so." [3]

The fact that you seem to equate "sufficient evidence" with weak relative risks that in most cases are not statistically significant gives the appearance that you have forsaken scientific standards and resorted to "advocacy" science in order to advance the government's anti-smoking agenda.

What else could explain the following?

Giving credence to a researcher with a political agenda

During your December meeting, James Repace, a known anti-smoking advocate, appears to have been instrumental in getting your NTP panel members to approve your recommendation that environmental tobacco smoke be listed as a human carcinogen.

For example, panelist Michele Medinsky, who was troubled by the weak relative risks reported in the studies in humans (as well she should be), said she was "comforted quite a bit" by Mr. Repace's comments:

Dr. Medinsky: "I guess the relative risks in this for environmental tobacco smoke are from my perspective quite low. And that was--that was troubling me this entire time. And I think James Repace's comments...if we could actually get a control group that was truly unexposed that the relative risk would go up comforted me quite a bit." [4]

["Comforted"??]

In other words, panelist Medinsky (and no doubt others) seemed all too eager to disregard the low relative risks reported in the studies because, it seems, Mr. Repace has convinced you that the relative risks really would be higher if only he could find a control group that was truly unexposed to environmental tobacco smoke. Theoretically that is possible, but it's also possible the relative risks would be even lower if there were a way to truly adjust for statistical bias and confounding effects. Theory and supposition are not adequate grounds for declaring any substance to be carcinogenic, especially when theory and supposition come from one person with a demonstrable bias.

Immediately following your December meeting, Don Shopland, formerly with the CDC's Office on Smoking and Health and presently serving with the National Cancer Institute as Coordinator of the Smoking & Tobacco Control Program, circulated an e-mail message to tobacco control advocates, in which Mr. Shopland praises James Repace for being a "major reason why the [NTP] Board approved listing ETS as a carcinogen and we are all indebted to him for undertaking this responsibility." [5]

Mr. Shopland concludes that "Should the Executive Committee approve the Boards action, ETS will be then put on the official NTP list of carcinogens and we can then use this to our advantage." (emphasis added)

To my knowledge, James Repace did not disclose to your panelists his strong ties with the anti-smoking movement. He says only that he "commissioned the EPA study back in 1987." [6]

Perhaps he should have added that he's been a paid witness since the 1970s for his testimony in support of government restrictions on smoking, and has worked extensively with anti-smoking groups such as Group Against Smoke Pollution (GASP) and Action on Smoking and Health (ASH). [7]

When proposed anti-smoking legislation was defeated in Maryland his response was that of an outraged activist, not an objective researcher:

Repace: "People aren't going to stand for this. Now that the facts are clear, you're going to start seeing nonsmokers becoming a lot more violent. You're going to see fights breaking out all over." (*Washington Star*, April 5, 1980, p. D-1) [8]

The fact that your NTP panelists allowed themselves to be swayed (and "comforted") by an anti-smoking researcher with an agenda warrants an explanation.

Giving credence to opinion over fact

Not included in your background document is the recently published IARC study [9], sometimes referred to as the WHO (World Health Organization) study, which found no overall statistically significant association between lung cancer risk and exposure to environmental tobacco smoke at home, at work, in vehicles, or in public settings such as restaurants.

Again, findings that are not statistically significant hardly constitute sufficient evidence that environmental tobacco smoke is a human carcinogen.

However, in an apparent attempt to make it look otherwise, during your December 1998 meeting, John Bucher, a member of one of your review

committees, selectively cited one finding from Table 3 of the IARC study showing a small increased risk (odds ratio of 1.64) for nonsmokers living with a spouse who smoked more than 23 "pack-years." [10]

Not mentioned by Dr. Bucher is the reduced lung cancer risk (odds ratio of 0.89) reported in that same Table 3 for nonsmokers living with a spouse who smoked between 13 to 23 "pack years."

If environmental smoke really is a human carcinogen, then how do you explain the reduced risk?

In fact, the 13 results reported on Table 3 of the IARC study are anything but consistent. Here is how they stack up:

- 8 show an increased risk (6 of them are not statistically significant)
- 1 shows no increased risk at all
- 4 show a reduced risk (one of which is statistically significant which means there was a protective effect from exposure to environmental tobacco smoke)

Such inconsistent results do not constitute "sufficient evidence" that environmental tobacco smoke is a human carcinogen. To selectively cite an increased risk without revealing or addressing the reduced risks indicates you did not wish to consider or examine all relevant data.

Equally surprising is that your panel of scientists appears to put more stock in an opinion piece written about the IARC study than in the non-significant findings reported in the study.

For example, during your December meeting, NTP panelist Dr. Frederick talked about the "very nice" editorial by Blot and McLaughlin [11] regarding the IARC study. This "very nice" editorial, says Dr. Frederick, concludes that when all of the evidence is considered, including the new data from the IARC study, "the inescapable scientific conclusion is that ETS is a low level lung carcinogen." [12]

Dr. Frederick found this "very nice" editorial (which doesn't jibe with the IARC findings) to be "very persuasive."

One wonders if Dr. Frederick even read the study since he erroneously states that Blot and McLaughlin, authors of the editorial, were "two of the investigators in the study." [13] The investigators are named on the front page of the IARC study and Blot and McLaughlin are not among them.

Reliance on the now-defunct EPA risk assessment

You seem oblivious to the fact that U.S. District Judge William Osteen "vacated" the sections of the EPA report that you reference throughout your background documents. [14] In other words, he ruled them null and void. You can imagine my surprise when I went through your background documents and saw that not only had you extensively referenced the vacated sections of the EPA report, you also included *photocopied pages* from those sections.

In law, to "vacate" something -- as Judge Osteen did the EPA risk assessment on environmental tobacco smoke -- means to abolish, cancel, or obliterate.

To rely on material that has been obliterated in a court of law casts more than a shadow of doubt over your entire case.

Especially so, considering the judge's finding that the EPA "disregarded information and made findings on selective information...failed to disclose important findings and reasoning; and left significant questions without answer." [15]

In conclusion

I have not covered everything because others have already provided you with details which you apparently chose to ignore. The few examples I give here are meant to further show that your recommendation to include environmental tobacco smoke in your 9th Report on Carcinogens is without merit.



Martha Perske

Footnotes

[1] Criteria for Listing Agents, Substances or Mixtures in the Report on Carcinogens, U.S. Department of Health and Human Services, National Toxicology Program. "Known to be Human Carcinogens: There is sufficient evidence of carcinogenicity from studies in humans which indicates a causal relationship between exposure to the agent, substance or mixture and human cancer."

[2] National Cancer Institute release, 10-26-94.

- [3] Breslow and Day (1980). *Statistical methods in cancer research. Vol. 1. The analysis of case control studies*. IARC Sci. Publ. No. 32, Lyon, p. 36.
- [4] NTP meeting, December 2, 1998. Transcript p. 240.
- [5] Posted message by Don Shopland, coordinator, Smoking & Tobacco Control Program, National Cancer Institute. "National Toxicology Program and ETS," Message 0001, December 3, 1998. ETS-Talk Discussion List (ets-talk@smokescreen.org).
- [6] NTP meeting, December 2, 1998. Transcript p. 202.
- [7] Congressman Thomas J. Bliley, Jr., "EPA and Environmental Tobacco Smoke: Science or Politics?" Submitted to the U.S. House Committee on Energy and Commerce Health and Environment Subcommittee, July 21, 1993, pp. 14, 15.
- [8] Ibid., p. 15.
- [9] IARC (International Agency for Research on Cancer) study. Boffetta et al., Multicenter Case-Control Study of Exposure to Environmental Tobacco Smoke and Lung Cancer in Europe, *Journal of the National Cancer Institute*, Vol. 90, No. 19, October 7, 1998, pp. 1440-1450.
- [10] NTP meeting, December 2, 1998. Transcript p. 179
- [11] Blot, William J. and McLaughlin, Joseph K., Editorial: "Passive Smoking and Lung Cancer Risk: What Is the Story Now?" *Journal of the National Cancer Institute*, Vol. 90, No. 19, October 7, 1998, pp. 1416, 1417.
- [12] NTP meeting, December 2, 1998. Transcript pp. 234, 235.
- [13] Ibid., p. 234.
- [14] Order and Judgment, U.S. District Judge William Osteen, July 17, 1998. "The court vacates Chapters 1-6 of and the Appendices to EPA's Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders. EPA/600/6-90/006F (December 1992)."
- [15] Osteen, p. 90.